

INTERNATIONAL SEARCH REPORT

International application No.
PCT/CA2004/002106

A. CLASSIFICATION OF SUBJECT MATTER

IPC⁷ G01R 27/02, C25B 11/00, G01R 29/08, G01R 31/00, G01R 33/00 or G01R 29/00

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC⁷ G01R 27/02, C25B 11/00, G01R 29/08, G01R 31/00, G01R 33/00, G01R 29/00 or G01N 27/02 and keywords
US Class 324/243
ECLA G01N27/02,02C,02C1

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic database(s) consulted during the international search (name of database(s) and, where practicable, search terms used)

Delphion, Canadian Patent Database, Esp@cenet, USPTO, Internet and a combination of keywords (coil, testing, conductivity, resistivity, electrical, anode, electrode, carbon, aluminium, baking)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No(s). |
|-----------|---|--------------------------|
| Y | US 5 552 704 (Tencor Instruments) 3 September 1996 (03-09-1996), column 4, line 21 to column 5, line 55, column 8, line 48 to column 11, line 4 and figures 1 and 3 | 1-10, 13 |
| Y | US 6 268 723 B1 (Wherenet Corporation) 31 July 2001 (31-07-2001), column 2, line 13 to column 4, line 53 and figures 1 and 2 | 1-10, 13 |
| A | US 3 273 056 (Magnaflux Corporation) 13 September 1966 (13-09-1966) column 2, line 41 to column 3, line 3 and figure 1 | 1, 2, 5, 10 |
| A | US 3 936 734 (BBC Brown Boveri & Company) 3 February 1976 (03-02-1976) column 2, line 42 to column 4, line 23 and figure 1 | 1-7, 10, 13 |
| A | US 4 012 690 (Heytow) 15 March 1977 (15-03-1977) the whole document | 1-4, 6, 7, 10 |

[X] Further documents are listed in the continuation of Box C.

[X] See patent family annex.

| | | |
|-----|--|---|
| "A" | Special categories of cited documents : document defining the general state of the art which is not considered to be of particular relevance | "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention |
| "E" | earlier application or patent but published on or after the international filing date | "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone |
| "L" | document which may throw doubt on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) | "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art |
| "O" | document referring to an oral disclosure, use, exhibition or other means | "&" document member of the same patent family |
| "P" | document published prior to the international filing date but later than the priority date claimed | |

Date of the actual completion of the international search
04 February 2005 (04-02-2005)

Date of mailing of the international search report
11 April 2005 (11-04-2005)

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No(s). |
|-----------|--|--------------------------|
| A | US 3 361 962 (General Corporation) 2 January 1968 (02-01-1968) column 3, lines 15 to 46 and figures 1 to 4 | 1, 2, 10 |
| A | US 2 858 505 (Sun Oil Company) 28 October 1958 (28-10-1958) column 2, lines 2 to 55 and figure 1 | 1, 2, 10 |
| A | US 2 102 450 (Magnetic Analysis Corporation) 14 December 1937 (14-12-1937) the whole document | 1, 10 |

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.
PCT/CA2004/002106

| Patent Document Cited in Search Report | Publication Date | Patent Family Member(s) | Publication Date |
|--|------------------|--|--|
| US5552704 | 03-09-1996 | EP0631147 A1 JP2952156B2 B2 US5552704 A | 28-12-1994 20-09-1999 03-09-1996 |
| US6268723 | 31-07-2001 | US6170748 B1 US6268723 B1 US6393045 B1 | 09-01-2001 31-07-2001 21-05-2002 |
| US3273056 | 13-09-1966 | US3273056 A | 13-09-1966 |
| US3936734 | 03-02-1976 | CH568569 A5 DE2410067 A1 FR2260113 A1 GB1443407 A SE403939 B SE7501217 A US3936734 A | 31-10-1975 07-08-1975 29-08-1975 21-07-1976 11-09-1978 07-08-1975 03-02-1976 |
| US4012690 | 15-03-1977 | US4012690 A | 15-03-1977 |
| US3361962 | 02-01-1968 | US3361962 A | 02-01-1968 |
| US2858505 | 28-10-1958 | US2858505 A | 28-10-1958 |
| US2102450 | 14-12-1937 | US2102450 A | 14-12-1937 |